



SUCCESS FACTORS OF INTERNATIONAL EDUCATION AND TRAINING NETWORKS

LEON CIZELJ and WALTER AMBROSINI

President and Past-President of the ENEN Association, France

ROGER JASPERS

Chair of the FuseNet Association, Eindhoven Netherlands

CHRISTIAN SCHOENFELDER

Schoenfelder.Training, Köln Germany



Why E&T Networks?



- **Lisbon EU 2000 summit: strategic goal for EU is to become the most competitive knowledge-based economy with more and better employment and social cohesion**
- **Via further harmonization of educational curricula in Europe aiming at facilitating international mobility of the labor work force and enabling lifelong learning paths**
- **At the beginning of the 2000s, different challenges existed: expected shortages of human resources and their competences for**
 - **Fission: new built, plant modernization or decommissioning projects**
 - **Fusion: the path to fusion power (ITER, DEMO)**
- **Therefore, funded by Framework EC Programs (FP) 5 and 7, the implementation of education and training networks was supported by the European Commission:**
 - **ENEN - the European Nuclear Education Network,**
 - **FuseNet - the European Fusion Education Network**



History of Networks



- The “European Nuclear Engineering Network” (ENEN) project was launched under FP5 in January 2002
- The European Nuclear Education Network (ENEN) Association was established on 22 September 2003
- The “European Fusion Education Network” (FuseNet) project was launched under FP7 in October 2008
- The “European Fusion Education Network” (FuseNet) Association was founded in December 2010

Benefits of this approach

(networks founded on the basis of research and development projects funded by the EU):

- **Founding members could develop a common understanding on the mission and objectives of the networks**
- **Tangible results were developed that could then be further used by the new networks**
- **While relying greatly on the personal relationships during the project, international networks of different institutions could be built**



Target groups and members /1/



- Currently 67 members
- Members are public or private corporate bodies that have a legal status: universities, research organizations, nuclear industry, and/or any other organizations involved in the application of nuclear science and ionizing radiation
- Members provide academic or professional education and training in the application of nuclear science and ionizing radiation, and/or commit themselves to supporting ENEN
- Institutions from Japan, Russia, South Africa, Ukraine are connected to ENEN via MoU





Target groups and members /2/



- Currently 59 members
- Universities, research organizations, nuclear industry, and/or industrial or other organization members (like the ITER Organization)
- FuseNet activities shall address all education levels, from Master and PhD students to Post-docs
- Members are distributed nearly homogeneously over the EU





Objectives of Networks



- The preservation and the further development of expertise in the nuclear fields by higher Education and Training by
 - delivering a European MSc degree in nuclear engineering and promote PhD studies,
 - promoting the exchange of students and teachers participating in the network,
 - establishing a framework for mutual recognition,
 - fostering and strengthening the relationship with research laboratories, industry and regulatory bodies.
- To stimulate, coordinate and enable the best possible fusion education in Europe with the aim to enhance the expertise in the fusion area by higher Education and Training
- Students have a central role in the FuseNet view and the student support schemes are the most visible and successful activities of FuseNet,
The aim: to attract the best students and stimulate them to have access to excellent education

- Award of

- *European Master of Science in Nuclear Engineering (EMSNE) certificate*
- ENEN PhD Prize



- Special events

- In connection with General Assembly
- ENEN PhD Event

- Specific E&T projects, currently

- ANNETTE
- NUSHARE
- PETRUS III
- EUJEP 2



- Award of

- *European Fusion Master Certificate*
- *European Fusion Doctorate Certificate*

- Special events

- In connection with General Assembly
- FuseNet PhD Event



- Work packages funded by EUROfusion

- Organization of annual Fusion PhD event
- Support to PhD students
- Support to the development of new educational activities
- Development of Joint Educational Tools
- Industry and Training
- Consultancy for PhD programs
- Support to Master students



Network web sites



- Information for members
- and interested parties (students)
- Current E&T offers
- Interaction and communication within the network
- Access to important documents for members



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Factors that are crucial for the success of networks:

- 1. Public education and training related activities that provide appropriate diploma or certificates in line with the network's mission,**
- 2. An effective, up-to-date hub of information and possibly also communication between the members and outsiders,**
- 3. Externally funded projects in which members of the network are involved in, and that develop tangible results to achieve the network's objectives.**

Only the last factor will support the long-term operation of an E&T network!